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## ON THE MIGRATION OF THE COMMON JAY.

BY JOHN CORDEAUX.

SEEN in the depth of our woodlands furtively flitting from tree to tree, or quietly stealing from the corner of a cover as the noisy line of beaters advances, the flight of the Jay appears both laborious and heavy, kept up by frequent flappings of wing, undulating, too, and somewhat uncertain in direction, and seldom prolonged beyond the nearest tree, hedgerow, or copse. Under such circumstances the bird seems little capable of crossing any width of sea, or of taking a long migratory flight. The fact, however, remains beyond dispute that this seemingly weak and slow-flying bird is capable of long-sustained flights, which will compare even with those of the swift-winged Woodcock and Grey Plover.

Great numbers of Jays, along with other migrants, crossed Heligoland with an east to west flight in October, 1876. Mr. Gätke's notes sent me at that time are as follows:—"Oct. 21st, 1876. East; very strong. *G. glandarius*, thousands passing the island; some landed, caught; coming—never ending. Oct. 22nd and 23rd. East, strong. *Glandarius*, a great many still."

Since that date, and up to this year, Jays do not appear to have been observed at Heligoland, as Mr. Gätke's subsequent, and almost continuous, notes make no mention of them. Either the migration has passed some distance off the island, or been carried on at such a height as to be beyond the ken of human vision.



During the past autumn Jays have again passed Heligoland in enormous numbers. Mr. Gätke, under date of October 8th, writes :—" A perfect storm of Jays has passed over, and on both sides of the island, during the last three days. No one living has ever seen the like here ; about fifty years ago enormous numbers were caught here, but during my time only twice or thrice have they come. On the 6th October, S.E., E. by S., very strong, clear, coldish, *G. glandarius*, continuous flights of hundreds. 7th, clear, blew about No. 8 : *G. glandarius*, great flights continually passing. 8th, S.E., rather fresh, clear : *G. glandarius*, more than ever passing on above and beside the island."

It is noticeable that in both these years the migration of the Jay was in October, and continued over three days, and that it was carried on under the circumstances of a strong easterly gale.

The question then naturally arises, *whence* and *whither* was this great " storm " of Jays (as Mr. Gätke terms it) steering their course ? Seen then seventy miles from land off the mouth of the Elbe, moving from east to west in a strong easterly gale, continuous flock after flock, never deviating from their course, which was straightforward seemingly across the wide tossing waters of the North Sea, with one purpose animating all alike, the forsaking of their native forests for a long flight to the west.

Mr. Gätke has always maintained that autumn migration, as observed at Heligoland, does not run north and south, but from east to west, birds invariably coming from the eastward and passing westward. The observations taken during late years on the migration of birds, as observed at lighthouses and light-vessels, quite confirm the views of the veteran observer. It is rarely that we find birds coming to our shores from any point north of east ; migration is from east to west, or points south of east to north-easterly points. This great passage of Jays across Heligoland points also to the correctness of his theory, for it could hardly have its origin in the north, the whole of Scandinavia failing to supply the stream for more than a few hours.

It is reasonable, therefore, to suppose that they came from Eastern Europe across Germany, from the immense forest area between the Oder to beyond the Vistula, and probably much further east than this to the confines of Eastern Europe. That the area covered by this flight was very great we may well judge from the fact that the stream was *three* days in passing. Whether

the first impulse to move began at the extreme east or west of the range, extending backward or forward, we have unfortunately no means of knowing.

It will be interesting to learn if any great flight of Jays, corresponding in any degree with the thousands that crossed Heligoland, have been observed anywhere by our sharp-eyed reporters on the English coast, or any considerable increase in the ordinary number frequenting our woodlands. Previous to receiving Mr. Gätke's letter I had made a note of the number seen in shooting some small plantations in this neighbourhood, but certainly not exceeding double what we might expect to see under any circumstances.

Mr. Stevenson, in the 'Birds of Norfolk,' vol. i., p. 280, conjectures that the Norfolk Jays receive at times considerable accessions to their number in the autumn. So far as I am aware there is no direct evidence of the fact, except the statement, as given by Messrs. Sheppard and Whitear,\* to the effect that "Some years since, as two gentlemen were sporting at Tunstal, in Suffolk, distant about five miles from the sea, they observed an extraordinary flight of Jays, passing in a single line from seaward to the interior. This line extended further than the eye could reach, and must have consisted of some thousands. Several of them were killed as they passed; but the firing at them did not occasion the rest to deviate from their line of flight."

It may be that the Jays seen crossing Heligoland passed southward along the European coast-line, as we know is the case with many birds which regularly cross that island in large numbers, and which rarely turn up on our own coast, except perhaps as solitary examples: be this as it may, however, this migration in such enormous numbers is a wonderful and striking phenomenon, and supplies cause for much conjecture—conjecture as to the "how and why" of this simultaneous movement; whether a mere normal phenomenon, which, under certain conditions of wind and weather, is at long intervals brought within the notice of the Heligolandiers, or a something out of the ordinary range of migration due to a scarcity of food, or some other cause which long patient waiting and extended observation alone can determine.

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\* 'A Catalogue of Norfolk and Suffolk Birds, with remarks,' 1826.

## FIELD NOTES IN NORWAY IN 1881.

BY THE REV. H. H. SLATER, F.Z.S.

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THE following field notes were accumulated during a five weeks' visit to Norway in the spring of 1881. Of this time, May 9th to 10th were spent at Naersness, on the Christiania Fjord; May 11th to 22nd at Lillehammer, on the Miösen Lake; May 24th to 31st at Laurgaard, in the Gudbrandsdal; June 1st to 7th at Fokstuen, on the Dovre Fjeld; June 8th to 11th at Hjerkin, the next station to Fokstuen: we then returned to Christiania by the Foldal.

I was much struck by the scarcity of birds of prey. I do not think that I saw nearly so many as I should have done in an equal length of time in any tolerably uninhabited part of Scotland, or the north of England. The cause of this, to a great extent, is the reward which a short-sighted Government has placed on the heads of all the larger Raptores; owing to which they are ruthlessly hunted down by the peasants.

But there is a phenomenon in connection with this class of birds to which we have no parallel in England. At varying intervals of years the Lemming makes its appearance in countless numbers, overrunning the whole country; simultaneously the numbers of the birds of prey are largely increased, so that birds which are usually rare, such as the Snowy Owl and Jerfalcon, are then found on the fells not uncommonly. That these should make their appearance in greater numbers when suitable food is so plentiful, is intelligible and natural, but when we find that birds like the Capercaillie and Willow Grouse, and others, which have no interest in common, apparently, with the Lemming, are more plentiful in "Lemming years," it becomes rather difficult to see the connection between the two circumstances. Yet Herr Collett informs me that such is undoubtedly the case.

There seems to be some uncertainty how the new Game Laws will affect the naturalist collecting in Norway, but my experience leads me to believe that they will make but little, if any, difference to him. Undoubtedly no foreigner has now any right to carry a gun without a license on crown lands (such as the Dovre Fjeld); but I took out no licence. Norwegians do not take for granted,



when they see you with a gun, that you must necessarily be carrying it for illegal ends. Doubtless, if I had shot a bagful of ryper, I should soon have had a visit from the Lensmand, but as it was everyone seemed to take an interest in what I did, and to wish to assist me in any way possible.

The following were the birds I met with :—

MISSSEL THRUSH, *Turdus viscivorus* (L.)—Not uncommon near Lillehammer; but once seen near Laurgaard, and never on the Dovre Fjeld.

SONG THRUSH, *T. musicus* (L.)—Not uncommon in woods near Lillehammer, and up the Gudbrandsdal. In pine woods it appears generally to choose those spots where the trees are young and thick, and is not averse to marshy places.

REDWING, *T. iliacus* (L.)—Common in the Gudbrandsdal. On May 12th, near Lillehammer, it was still in flocks. At Laurgaard, May 24th and following days, it was pairing and preparing to nest in the birch growth. At Fokstuen it was fairly plentiful and nesting on June 2nd. At Hjerkin, on June 8th, the Redwings were singing beautifully in the birch woods, their song somewhat between those of the Missel and Common Thrushes; a nest I found that day was in the forks of a birch tree about eighteen inches from the ground, and the young birds in it were just getting their first feathers. It was curious to notice that there were two large birch tracts at Hjerkin, one to the east, towards Foldalen, the other to the west, under Gederyggen; the former seemed to be appropriated by the Redwings and the latter by the Fieldfares.

FIELDFARE, *T. pilaris* (L.)—Pretty common, breeding on the birch-clad slopes of Gederyggen, near Hjerkin, and less commonly around Fokstuen.

BLACKBIRD, *T. merula* (L.)—The rarest in Norway, as it seemed to me, of the *Turdidæ*. Pretty common near Naersness (Christiania Fjord); rare near Lillehammer, where I saw one and heard another; and not seen at Laurgaard nor on the Dovre Fjeld.

RING OUZEL, *T. torquatus* (L.)—Not uncommon near Laurgaard, and also on the Dovre Fjeld, in the birch region above the fir, where a search would probably have revealed the nest.

DIPPER, *Cinclus melanogaster* (Brehm).—I did not see this bird on Dovre, and only one at Laurgaard, which was feeding

strange to say) in one of the wooden pipes which conveys the water into a small corn-mill by the roadside which leads to Sels Vand. At Lillehammer it was pretty plentiful, on the Mesna, at least, where I once saw five the same day.

WHEATEAR, *Saxicola œnanthe* (L.)—Common at high and low altitudes alike, wherever there are rocks or stony places; nests in old walls or ruined cottages, under stones, or even in holes in the ground.

WHINCHAT, *Pratincola rubetra* (L.)—Dresser ('Birds of Europe,' vol. ii., p. 256) does not give one the idea that this bird is at all abundant in Norway, and up to my leaving Lillehammer I did not find it so; but as I went up the Gudbrandsdal I found it getting more and more plentiful, till, at Laurgaard, it was one of the commonest of all birds in the low grounds; it frequented the willows on the edges of the marshes, and any one could have shot thirty in a day. On the Dovre Fjeld it seemed rare, being apparently a lowland bird in Norway; but in the Foldal, below Dalen, it seemed fully as plentiful as at Laurgaard.

REDSTART, *Ruticilla phœnicurus* (L.)—Very plentiful both at high and low altitudes. Nests in Norway, by preference in an old Woodpecker's or Tit's hole in a tree. It certainly has the power, in spite of its slender bill, of enlarging the hole to suit its requirements, as I found a nest at Fokstuen with one egg, of which the parents kept close to me; the fresh chips at the foot of the tree (it was a birch) were, many of them, lying in such positions on leaves, &c., as rain would have at once removed them from, which of course gave me approximately the date of their deposition. It is possible that the nest might have been commenced by a Woodpecker and deserted, but the shape of the hole was quite different to what a Woodpecker would have made, being almost circular, and only about seven or eight inches deep, while the nest which was placed in it was nearly six inches in external diameter.

RED-SPOTTED BLUETHROAT, *Cyanecula suecica* (L.)—Very plentiful on the Dovre Fjeld. At Fokstuen I might have shot twenty males any day, but the females were great skulkers, and seldom showed themselves. The note of this bird is remarkably varied, but may be at once recognised by the metallic "ting ting" with which it usually commences its warble, which is just like a couple of strokes on a small high-toned triangle. It also has a

peculiar hurried way of singing, as if it were anxious to get to the end of its song as soon as possible. At Hjerkinna it was very common also, both in the birch scrub and even in the dwarf willow and juniper scrub above the birch limit on the fells. I found a nest here with eight eggs, and sat down by it to blow some of them. The old birds at once came up and hovered angrily round me, often within a yard of me, though the eggs were not at all incubated, the female also quite forgetting her usual anxiety for concealment. Not only they, but every other Bluethroat within hearing of this excited couple, hurried up also, until I must have had about a dozen scolding within ten yards of me at once; the moment I rose, however, they all vanished, like Roderick Dhu's warriors, "where they stood." The nest was made of the finest grasses, and placed in an open space in the birch wood, under a branch of trailing juniper.

ROBIN, *Erithacus rubecula* (L.)—An Englishman, familiar with the way in which this bird courts the society of man in his native country, is surprised to find it shunning man altogether in Norway, and taking up its abode in the densest pine woods. It seems not uncommon, but very impatient of approach.

WHITETHROAT, *Sylvia rufo* (Bodd.)—I did not find this bird at all plentiful; in fact, I only saw two at Lillehammer.

LESSER WHITETHROAT, *S. curruca* (L.)—Though I did not find this plentiful, I saw it much oftener than the last. One was singing at Naersness, on the Christiania Fjord, on May 9th. I saw several near Lillehammer, one at Laurgaard, and two on the Dovre Fjeld. I shot one of the last (as it is a bird more generally seen at low altitudes) in order to be quite sure. It was singing cheerfully, and flitting uneasily, as its manner is; from birch to birch, near Hjerkinna, about 3800 feet above sea-level.

BLACKCAP, *S. atricapilla* (L.)—I only remarked one, which was in full song, at Naersness on May 9th.

GOLDEN CREST, *Regulus cristatus* (Koch).—Very abundant in conifer-growth at all altitudes.

CHIFFCHAFF, *Phylloscopus collybita* (Vieill.)—Most abundant everywhere in fir-growth; I only noticed one on the Dovre Fjeld.

WILLOW WREN, *P. trochilus* (L.)—Equally common with the last in the lowlands, but differing from it in being just as common at high altitudes, where it is found not only in the birch woods,

but even in dwarf willow and juniper scrub on the fjelds. I noticed several on the fjelds near Laurgaard, in a place where the ground was covered several feet deep with snow for miles; they, with Pied Flycatchers, were singing merrily in the birch trees.

ICTERINE WARBLER, *Hypolaïs icterina* (Vieill.)—One near Røken, close to Christiania, on May 9th; another at Lillehammer.

SEDGE WARBLER, *Acrocephalus schænobaenus* (L.)—It is somewhat remarkable that this bird should be so plentiful in the extreme north of Norway, in Finmark and Nordland, and yet be so rare south of the Arctic Circle! I saw one or more near Laurgaard, in the willows amongst the marshes, a place one would consider well suited to their habits; one of them I heard singing during the night. I noticed none elsewhere.

HEDGESPARROW, *Accentor modularis* (L.)—This bird, like the Robin, does violence to an Englishman's previous notions when visiting Norway. In that country it avoids the neighbourhood of man, and is seen generally in the pine forests, but sometimes even in the heather and dwarf willow above the birch region, and is very shy.

LONG-TAILED TITMOUSE, *Acredula caudata* (L.)—Said to be common in Norway. I only happened to see about half a dozen. Its manners and voice are much like those of our dark-headed representative, but it is certainly, with its pure white head and yellow eyelids, a much prettier bird; and it seemed a little wilder also.

GREAT TITMOUSE, *Parus major* (L.); CONTINENTAL COAL TITMOUSE, *P. ater* (L.)—Common.

MARSH TITMOUSE, *P. palustris* (L.)—Said to be abundant up to Trondhjem. It was plentiful enough on the Christiania Fjord, but I only saw one at Lillehammer, and none north of that, its place being apparently taken by the following.

NORTHERN MARSH TITMOUSE, *P. borealis* (De Selys).—I did not notice this bird till I got to Lillehammer, where it was abundant, as also at Laurgaard; less so on Dovre. It cannot be mistaken for the last for a moment, even at some distance, being larger, much greyer, and the black cap prolonged further down the back. All the specimens I obtained, and all the dozens I saw in the woods, were much greyer than the bird figured in Dresser's 'Birds of Europe' (pl. 109), both on the back and on the flanks.



BLUE TITMOUSE, *P. caeruleus* (L.)—Pretty common, especially near Christiania.

CRESTED TITMOUSE, *Lophophanes cristatus* (L.)—Common in fir woods. In the large mixed flocks of Titmice one often meets with in the woods, this bird seems to take the lead, and to direct to some extent the movements of the others. Its note is stronger and more musical than those of other Tits, and when it happens to be alarmed and to fly off, calling out, the others, consisting of Marsh, Coal, and Blue Titmice, with sometimes Long-tailed Tits and Tree Creepers, generally follow at once. It seems to prefer young Scotch fir-growth to any other, where the trees are from twelve to eighteen feet high.

NORTHERN NUTHATCH, *Sitta europea* (L.)—I only remarked one example—at Naersness—of this bird, which is said to be found as far north as the hazel and oak.

Creeper, *Certhia familiaris* (L.)—Common, often consorting with Titmice, as in England.

WREN, *Troglodytes parvulus* (Koch).—Pretty common south of Dovre in fir woods, and occasionally in birch-growth on Dovre. Much less tame and familiar than in England.

WHITE WAGTAIL, *Motacilla alba* (L.)—Very common and tame; flies and runs in the streets and on the quays of Christiania like the Sparrow in London. In the country you seldom see a farmhouse without one pair, at least, of these birds about it (during the summer only, of course), nor are they often seen at any distance from a house. I found two nests, each with six eggs; one in the wall of an outhouse at Hjerkin; the other in the lake-embankment at Hamar, on Miösen. The nest is composed of fine grasses, with or without a little horsehair in the lining, and the eggs, which closely resemble those of the Pied Wagtail, have sometimes a ring of aggregated spots at the larger end.

GREY-HEADED WAGTAIL, *M. viridis* (Gm.)—First seen at Laurgaard, where it was not uncommon; but it was much more plentiful on Dovre, especially at Fokstuen, where a dozen might be seen together in the taller willow-growth near the station. It seems to breed later than *M. alba*, and I only found one nest, incomplete, in a wall near Hjerkin.

MEADOW PIPIT, *Anthus pratensis* (L.)—Very common everywhere; perches in trees and bushes a great deal more than it does in England.

TREE PIPIT, *A. trivialis* (L.)—Very common in the lowlands, but apparently very rare on the Dovre Fjeld.

WAXWING, *Ampelis garrulus* (L.)—I hoped to meet with this bird alive, but all I saw of it consisted of the dried, weather-beaten remains of several which had been caught in horse-hair nooses on a mountain ash near Lillehammer during the preceding winter.

PIED FLYCATCHER, *Muscicapa atricapilla* (L.)—Plentiful. The first flight of this bird (consisting, apparently, of males alone, not quite in full breeding plumage) made its appearance at Naersness, on the Christiania Fjord, on May 10th. The day before I had seen none; this day they were abundant and rather listless. I had always considered the plumage of this bird and that of the Spotted Woodpeckers as very conspicuous—almost what might be called “loud.” But I had never seen either before in what was evidently their proper sphere, amongst the black and white stems of the birch trees, with which their colours harmonized so closely as to make them rather difficult to make out than otherwise, when they kept pretty still.

SWALLOW, *Hirundo rustica* (L.)—Plentiful in the Gudbrandsdal, getting less numerous towards Dovre, where they do not seem to occur. They made their appearance at Lillehammer for the first time on May 16th.

MARTIN, *Chelidon urbica* (L.)—Abundant everywhere; the only Swallow I noticed on the Dovre, where it breeds abundantly under the projecting eaves of the stations and their outhouses.

SAND MARTIN, *Cotyle riparia* (L.)—Common in the Gudbrandsdal, where it often selects the turf-roofs of the cottages to make its nest-burrows in.

SISKIN, *Chrysomitris spinus* (L.)—Common in conifer woods, but often seen feeding amongst alders and birches by stream-sides.

SPARROW, *Passer domesticus* (L.)—Common, but I did not notice it on the Dovre.

TREE SPARROW, *P. montana* (L.)—Not uncommon; is found near farm-houses, where the last mentioned bird does not come, but they do not seem to associate together.

CHAFFINCH, *Fringilla cœlebs* (L.)—Very common; but I never saw it on the Dovre Fjeld.

BRAMBLING, *F. montifringilla* (L.)—Was in flocks at Lillehammer the earlier part of my stay there; when I got to Laur-

gaard it was paired and building in the birch-growth. At Fokstuen I found several nests, some with eggs. This bird displays great anxiety when you approach the nest; both male and female come and perch on the trees by the nest, sometimes within a yard of your head, uttering their plaintive cry. I paid them the compliment of attributing this conduct to parental affection until I found that their minds were quite as much troubled when the nest was so far advanced as to consist of about as much lichen and fibre as might be contained in an empty 12-bore cartridge case. The nest strikes one at once as being less tidy than that of a Chaffinch, and consists (on the Dovre Fjeld) in great part of reindeer-moss and similar lichens. The eggs principally differ from a Chaffinch's in their ground colour being bluer, though the latter occasionally lays eggs quite as blue as any Brambling's eggs I have seen. The call-note of the male has a peculiar, harsh, unmusical sound, and seems to consist of two different notes, a semitone apart, mingled and uttered together, rather reminding me of the noise of a double white-metal dog-whistle.

LINNET, *Linota cannabina* (L.)—Not uncommon in the valleys, but I did not notice it on Dovre.

MEALY REDPOLL, *L. linaria*.—I only identified this bird once to my satisfaction, when I saw a pair, apparently feeding, on the waste ground by the bridge at Laurgaard. I fancied I saw others at different times, but they were too shy for me to be quite certain.

TWITE, *L. flavirostris* (L.)—Appeared to be generally distributed, though in small numbers, on the Dovre Fjeld and the fells near Laurgaard.

NORTHERN BULLFINCH, *Pyrrhula major* (Brehm).—Not uncommon, but much oftener heard than seen. I tried to obtain specimens in the pine woods at Lillehammer by calling, but invariably without success; before I got sufficiently near the bird, a Hooded Crow always made its appearance (judging, I suppose, from its frequent calling that there were some eggs to be got) and drove my Bullfinch away. The would-be thieves occasionally got into trouble for their pains, for I never think a cartridge wasted if expended on a Hooded Crow.

CROSSBILL, *Loxia curvirostra* (L.)—I kept a sharp look out for this bird, but never saw it. Occasionally it is pretty common in the summer in S. Norway.

YELLOWHAMMER, *Emberiza citrinella* (L.)—Very abundant and tame. I shot a curious male Lillehammer, which had such a dark brown head, and showed so little chestnut on the rump, that I imagined, till I picked it up, that it was a male Ortolan not quite in full plumage.

ORTOLAN, *E. hortulana* (L.)—I saw one or two in the Gudbrandsdal, but it seemed pretty common near Christiania.

REED BUNTING, *E. schæniclus* (L.)—I saw one or two near Lillehammer, towards the Mesna Lakes, but found it abundant at Laurgaard in the marshes near the station. On Dovre it was one of the commonest birds, and was nesting when I was there.

LAPLAND BUNTING, *Plectrophanes lapponicus* (L.)—Very common at Fokstuen, but I saw none at Hjerkin; I have no doubt I could have killed eighty at the former place, where a dozen might be heard singing together. In fine weather they were very tame, running like mice amongst the willow-scrub in the marshes, and feeding composedly when I was only a few yards off. In wet weather they get very wild, and will not let you approach within forty yards. They were all paired whilst I was at Fokstuen, but (judging from the ovaries of two females I obtained) not laying; the male had still a few rusty feathers in the crown. The note—that of the male at least, for I never heard the female utter any but the low call-note common to both sexes—is one of the most pleasing I know. The ground-work is a sort of warbling twitter like the Sky Lark's song; but mingled with this, at regular intervals, come five fuller and more musical notes. When at some distance from the bird you lose the twitter, and these five notes are all you catch, being louder than the rest; they give you rather the idea of a peal of bells, and are always uttered in the same order. When singing the bird often sits on the top of a low bush; sometimes is high in air; in the latter case he descends, singing with elevated tail and outstretched quivering wings, like a Tree Pipit or Blue-throat. The food seemed to consist of sedge- and grass-seeds gathered from last year's still-standing plants, and mingled with small insects.

SNOW BUNTING, *P. nivalis* (L.)—I saw two small flocks at Lillehammer and one at Fokstuen, all very shy.

SKY LARK, *Alauda arvensis* (L.)—Very common near Lillehammer. I saw very few near Laurgaard, and none on the Dovre Fjeld.



STARLING, *Sturnus vulgaris* (L.)—Common in the lowlands.

JAY, *Garrulus glandarius* (L.)—Very common at Naersness and Laurgaard; less so near Lillehammer. On the Dovre I did not notice it.

MAGPIE, *Pica rustica* (Scop.)—Very common and tame. Nests in low trees close to the farm-houses, and passes a great part of its time on the roof of outhouses or near the doors. Near Fokstuen and Hjerkin stations there were old nests, but I saw no birds.

JACKDAW, *Corvus monedula* (L.)—Common in the Gudbrandsdal wherever there are cliffs.

HOODED CROW, *C. cornix* (L.)—Very common and tame all up the Gudbrandsdal, but apparently less numerous after you pass Laurgaard; not many noticed on Dovre. A bold and greedy robber in Norway, as he is everywhere else, and near Lillehammer is estimated to destroy half the eggs that all other birds lay. At Skjæggestad, in the Gudbrandsdal, I surprised a crow in one of the ditches by the river feeding on the brains of a warm and freshly-killed Water Vole. A Hooded Crow took me for a corpse at Spurn last autumn but one, as I was waiting at low water on the "clays," and came at me with a "caw" which might be translated "hooray!" He lived just long enough to repent of his mistake, but not long enough to escape the consequences of it.

ROOK, *C. frugilegus* (L.)—Not uncommon, but far less plentiful than in England. I do not know whether it forms rookeries in Norway, but I saw none.

RAVEN, *C. corax* (L.)—I saw one or two fly across the valley at Lillehammer, and one at Laurgaard. A pair were often visible near Hjerkin, towards Gederyggen, where they may have had a nest.

SWIFT, *Cypselus apus* (L.)—This bird had not arrived at Lillehammer up to my departure thence. I saw it two days afterwards, on May 23rd, at Byre, in the Gudbrandsdal. At Laurgaard there were many, but I saw none at Dovre.

GREAT BLACK WOODPECKER, *Dryocopus martius* (L.)—I only saw one, just beyond Sels Vand, near Laurgaard, which I watched for some time; it did not feed, and seemed uneasy at the presence of a Sparrowhawk, which absorbed all its attention, and prevented its noticing me. When it was aware of my presence within a few yards, it departed in a great hurry.

GREATER SPOTTED WOODPECKER, *Picus major* (L.)—Not uncommon, but oftener heard than seen. I only saw one near Lillehammer, though I heard many, and it was rare at Laurgaard. I saw none on Dovre.

LESSER SPOTTED WOODPECKER, *P. minor* (L.)—I shot a male near Lillehammer, and saw another. At Laurgaard I saw one, and at Fokstuen one.

THREE-TOED WOODPECKER, *Picoïdes tridactylus* (L.)—I only met with one example, a female, near Lillehammer, which was feeding on a nest of the large wood ant (*Formica rufa*).

GREEN WOODPECKER, *Gecinus viridis* (L.)—This, probably the commonest Woodpecker in Norway, I never happened to meet with.

WRYNECK, *Jynx torquilla* (L.)—I saw one on the hill above Lillehammer, and heard several others there and at Laurgaard; none noticed on Dovre.

CUCKOO, *Cuculus canorus* (L.)—Very common in Gudbrandsdalen, on Dovre, and in Foldalen. It may be persuaded to follow a person almost like a dog by imitating the note—a performance which never failed to astonish any Norwegian witness of it.

(To be continued.)

#### NATURAL HISTORY NOTES FROM ALDEBURGH.

By H. A. MACPHERSON.

During last autumn I spent a few weeks at Aldeburgh, and came across a few birds of some little interest.

Desiring to identify all the early arrivals and to get a few skins, I got a Thorpe fisherman to carry a gun occasionally. Upon August 16th a Redshank had still the nestling down adhering to the hind neck; the same morning a party of four Turnstones passed over head, stooping to A.'s call but not coming within gunshot. I got an example, a young bird, on the 19th, and saw a single Turnstone consorting with some common Sandpipers on the edge of the Alde river on August 27th.

Late in the afternoon of August 28th a fine Skua visited Thorpe mere, and I watched it for a considerable time; on August 31st a Great Skua, perhaps the same individual, was noticed at sea by the Thorpe fishermen.

On August 29th an old Curlew dropped within a very easy distance of our punt on the mud; five or six Knots came up from the north and flew round the mere at a considerable height; no mud being uncovered they went away south, possibly to the Alde river. Two days later some Knots pitched on the beach about 6 p.m.; one was in winter dress, but the other, a female, still bore considerable traces of the red breast.

On September 22nd, as I was crossing the bridge near A.'s cottage, I was attracted by the movements of a small grey stranger on the bank; I called A., and he crept within a few yards of the bird, but missed it, probably from excitement, for he saw that it was a Grey Phalarope beyond doubt, examining it very closely; I myself obtained a good view of it, for it was feeding busily; when missed, it flew away to the right and pitched on the mud at some distance; before we got up to it, away it went again, this time to sea; it was in full winter dress. A little later, a Lesser Tern came flying up the marsh towards us, near the railway line; being alone, he answered a call and A. got a shot, but, to my regret, breaking both wings. Its eyes were wonderfully bright; being an immature bird it is possible that it had been bred in the neighbourhood. The larger Terns apparently disappeared from Aldeburgh between the 2nd and 7th of September. We stopped a solitary Dunlin; in the afternoon A. brought me a fine Bar-tailed Godwit, a mature male, still wearing the red breast of summer; the latter was also killed on the edge of the marsh, near A.'s own house, which affords excellent opportunities for observing birds.

Turning out shortly before 6.30 a.m. on September 4th, I found that a large body of Sand Martins, together with a few House Swallows, were already streaming away south, apparently following the coast-line. When first observed, the air was literally full of them; by 7 a.m. the main flight had passed, though a few stragglers continued to pass southwards during the greater part of the day.

After reaching Thorpe Bridge, and passing a number of *C. riparia* resting upon the sails of the water-mill, I struck into the marsh, but saw and heard no waders except Ringed Plover, until I crossed the railway line, when a Green Sandpiper got up from the side of the river, this part being preserved, and went away showing the white tail conspicuously. I subsequently

found him feeding in a small creek not far from the sea, but though I wanted a specimen, the ubiquitous Ringed Plover, on one or two different occasions, gave the alarm prematurely. A few minutes later a fine Godwit, wearing the red breast, got up suddenly very close to me, showing the white rump beautifully; four or five Godwits then rose on the other side of the marsh and flew around, but did not pitch near me.

September 5th was very wet, and I could hardly persuade A. to turn out in the evening with his gun; two large parties of Dunlins and of Ringed Plover were feeding about 6 p.m. near his cottage, out of which he pointed out to me a couple of Pigmy Curlews; the one he secured was in full winter dress, whereas an example which Messrs. Burton, of Wardour Street, received at the same time, with several others,—shot, as the gentleman who shot them kindly told me, out of a party of nineteen, at Winchelsea, on September 4th,—had still much of the red breast, suggesting that it had not left its breeding quarters very long. On September 6th a Whimbrel turned up, and answered A.'s call, but did not come within shot; it was killed a few days later by a Thorpe man.

On September 7th we sailed down the Alde river hoping to see some Terns, as they breed in some numbers on a certain part of the beach; not a Tern however did we find, and it seemed probable that they had gone away south. Near Orford we were surprised to see a brace of Wigeon feeding on the left bank upon the mud; the wind being with us we got at them with difficulty, and A. missed a rather hard chance. Mr. E. G. Waddilove tells me that he killed two couple on Poole harbour on Sept. 22nd, this autumn, and fancied that even they were early birds. Near the mouth of the Alde, A. missed a common Scoter which came down to us, as we waited for it, with the tide. *Edemia nigra* was not much disconcerted, and when we began to "tack" home, after seeing nothing but a few Curlews, Redshanks, Common Sandpipers, and Ringed Dotterel, besides a single Godwit, the old fellow was on the feed and diving away in the same place. He had strayed from a party of sixteen or seventeen of these sea ducks, which were enjoying the shelter of the outer bank of the river, not at all far from land. After walking round the marsh from before daylight on September 8th, without securing a bird, we found that a pair of Golden Plover had pitched



on some dry mud near A.'s cottage; they seemed tired, and proved to be a male and female in a transitional dress, their black breasts being prettily marbled with white. During my forced absence, from September 9th to 13th, A. secured a couple of Sanderlings; they were feeding by themselves on the patch of mud patronised by the Phalarope of September 2nd, and proved to be a mature male and female in winter plumage.

On September 14th at flight time, a party of twelve or fourteen waders came up from the north and pitched on the mud on the Aldeburgh side of the mere; punting within a few yards of them, under cover of a bank, I recognised at least two or three examples of *T. subarquata*, by their white tail-coverts and curved bills: to make sure of their identity I went for a gun, but it was too dark when I returned to make more of them. I searched for them long and wearily on the 15th to no purpose, but next day we saw four examples, two of which A. shot for me, killing both at one shot. On September 18, a Thorpe fisherman showed me as a *rara avis* a fine Corn Crake, which he had picked up on the 17th on the beach, exhausted by a long flight. After resting for twenty-four hours it went away south happily enough. A few minutes later I came across a "red-tail" which I felt certain belonged to the black Redstart; it was shy, and after A. had missed one shot I decided to try to trap it, thinking that as I trapped two examples abroad in 1881, with ease, I could probably take this bird. Unfortunately, when I returned with a trap, I could find no traces of *titys*, though I waited until dark and searched the neighbourhood with all possible care. I do not think that there can be much doubt that it was a *titys*, immature or female; for the old male is so easily recognised by the white alar patch. When first seen it was searching for food in a manure heap, around which it spent the morning; there was no shelter except of nettles, nearer than a thin hedge, distant perhaps seventy yards; and its quarters were close to or on the beach, whereas I have never seen *phoenicurus* very near the sea; moreover, it flew about the hen-houses with the familiarity that this species haunts chalets and cowsheds in Switzerland; it actually entered one hen-house but darted out just as I tried to shut it in; its flight was that of *titys*, and as far as I could ascertain it was certainly that bird. I should have taken more pains to examine its dress had I not

felt sure of securing it. The same evening heavy rain and wind came on, and I have no doubt that *titys* left the exposed spot where I found him for sheltered quarters soon after I saw him last. As I was flying home for a trap, up got a fine Snow Bunting; as he went away with that uncertain butterfly-like flight which has been described so accurately in Mr. Seeböhm's 'Siberia,' I thought that we had seen the last of him. Turning out soon after daylight on the 19th, in the hopes of trapping *titys* (for which I searched all Thorpe unsuccessfully until I had to hurry back to catch the train to town), I was cheered by finding *P. nivalis* flitting along the beach between Aldeburgh and Thorpe; as no one else seemed to be about, and as it was still raining very heavily, the bird of icebergs was not wild, and with care I approached within a few yards and watched him as long as I could linger on *titys*' account; from his white wings and general appearance I felt that he was a male.

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#### ON THE TREATMENT OF SNAKES IN CAPTIVITY.

BY ARTHUR STRADLING, C.M.Z.S.

(Continued from Zool. 1882, p. 456.)

To those who are inclined to go the expense of building huge dens, with elaborate appliances for heating them, to accommodate twenty-foot Boas and Pythons,—and there be they, of whose acquaintance I am proud, who would house the Great Sea Serpent himself, if they could get him,—to such I address myself but briefly, since they will probably take for their models the cages for reptiles of that description in one or other of our European zoological establishments. They can hardly do better than adopt the pattern of those in the new Reptilium at the Regent's Park, where a marked improvement upon the old edifice will be noted, although the latter had the reputation, until quite recently, of being the best of its kind in Europe; a great change has been effected, not only in the size and construction of the compartments themselves, admitting of better exhibition of their occupants, but in the water-supply, facilities for cleaning, and other arrangements connected with them, all of vast importance to the well-being of the snakes, and which, we may hope, will

demonstrate their value in diminished bills of mortality. Nevertheless, I take it for granted that very few amateurs, even the most enthusiastic, contemplate the erection of a reptile-house; and as isolated cages necessarily present some points of modification, a short chapter dealing with spacious lodgings and the serpents best suited to inhabit them may not be out of place.

First, as to the situation. Such a cage is most frequently built in an orchid or other exotic house or conservatory, and it seems reasonable to imagine that there would be the best place for it, no extra, specially applied, heating apparatus being required, and greater ventilation permitted while the high temperature is constant. But it has this disadvantage; the excessive warmth of the place renders any but the shortest stay in it disagreeable to dwellers in a temperate clime, to say nothing of the dangers attending the sudden transition to the outer air in cold weather. The consequence is that the snakes are rarely visited, and never become tame; or, if previously tame, soon become wild again. Setting aside the presumption that the creatures are kept for the purpose of study, too much stress cannot be laid upon the injunction that *for their own welfare* they should be placed where they can grow accustomed to the presence of human beings (and especially of particular people) as much as possible; where, in fact,—to use a common phrase which expresses the same idea from an opposite point of view,—they can “always be looked at,” and the more they are looked at, after the first novelty of their position as captives has worn off, the better. The tamest snake becomes nervous and spiteful in a very short time if put away out of sight, a circumstance frequently noticed by those who are obliged to cover up their pets in the winter through not being provided with adequate means of supplying artificial heat. It is a most important point this. A serpent's chance of doing well in confinement is, like that of most other animals, in direct proportion to the equanimity with which it accepts the situation, *ceteris paribus*. We all know the difficulties with a newly-caged wild bird or beast, the injury it may inflict upon itself in its terrified efforts to escape and no less terrified attempts at assault upon its captors, its refusal to feed, and not infrequent death, independent of these secondary causes, from sheer fright. All these things occur with snakes in

like manner, with the additional complication that, in endeavouring to strike, they bruise or cut their mouths, which, as we shall see later on, is an accident of peculiar gravity. A small "dark-green" (*Zamenis atrovirens*), which was introduced to the public gaze somewhat prematurely at the Zoological Gardens, actually beat itself to death against the glass; and hundreds of recently-caught specimens—probably, if the truth were known, a large majority of those that are taken alive—are speedily killed by being teased and induced to fly at the wire or glass covering of their box. They must be gradually habituated to the presence of spectators; a process by no means lengthy, though different species and different individuals vary very much in their capability of being tamed.

There is always a possibility of certain little accidents, too, which renders it desirable that they should be under the owner's eye—such as the occasional swallowing of one by another at feeding-time, getting their heads jammed into holes and corners, casual defects in the heating arrangements, and so forth. When the snakes are accustomed to man, these can be remedied with little danger or difficulty, and they will feed unreservedly and display their various characteristics under observation. The only greenhouse cage for big serpents that I have ever seen meeting these requirements was one built against the wall of the house, into which a sheet of plate glass of the same length was let; the cage itself thus formed an immense window for one of the rooms, while the snakes were really luxuriating in the tropical heat of the conservatory outside. Unfortunately, the plans were altered before it was completed, and the whole thing was turned into an aquarium instead.

Wherever it may be established, the chief consideration will, of course, be its size. This must altogether depend upon that of the reptiles for which it is designed. It cannot be too large for them; and I suppose it is hardly necessary to condemn the cruelty of imprisoning huge constrictors in those abominable *flat cases*, like those that are used for trinkets in a jeweller's shop, in which they are too often cramped up in travelling menageries and other exhibitions. Speaking generally, the height of the cage ought to be equal at least to two-thirds of the serpent's length, since it will rear itself up at times to that extent. It is not absolutely necessary to have it as long as the snake, though



it should not be less ; but the width ought always to exceed half the length of the body, so that the latter may be powerless to exert its expansive force against the front and back when doubled in a bight between them. Overcrowding is an evil to be avoided ; in a den of the dimensions here roughly indicated, four such snakes as the one supposed to be used for illustration of the proportionate length, breadth and height, will be quite enough.

Now, as to construction. Use as little woodwork as possible. It rots with the heat and damp ; harbours insects which annoy the snakes fearfully and even destroy their eyes, these being undefended by lids ; and is subject to perforation by rats and mice, which not only make an ingress for themselves and possibly kill the legitimate occupants, but by so doing provide a means of egress for the latter. Metal is too energetic a conductor of heat ; the best material for the floor and sides is Portland cement. The front must be of glass always—if it can be arranged so that one, two, or all three of the other sides shall be transparent also, so much the better ; but bars, netting or wirework of any kind should never be employed, whether the cage be itself situated in a warm atmosphere or whether it is furnished with applied heat. Nor should any apertures to which they can have access exist, except the most minute.

The most gentle snakes, no matter how long accustomed to confinement, will press and wriggle with all their might against the margins of an opening in their endeavours to get through until they cut their lips and rub their muzzles raw ; not necessarily from any desire to escape, since they will behave in precisely the same manner when allowed to roam through the open door, and are as likely to make their efforts from the outside as within. They are of an exploring and inquisitive nature, and if they discover a hole in their tree, will try to get their heads into it. I have often watched a snake making the most desperate and absurd attempts to pass through the ornamental spaces in a fender, over which it was repeatedly gliding backwards and forwards. For a similar reason, any beam or bar or ledge which traverses the cage should either stand well away from the sides, so that the snakes may pass freely round it, or should lie fairly and squarely against the solid work so that they cannot pass at all ; if any small and insufficient interval be left, they will injure themselves in persistent struggles

to force their heads between, and very likely do other damage if they succeed.

There is another contingency also, which makes it decidedly advisable to guard against leaving open spaces in any accessible position with certain serpents, and which has given rise to awkward *contretemps* more than once in our own and other zoological collections. I will relate a personal incident, by way of proving that the possibility to which I allude is no mere fanciful one. I was once bringing home from Brazil a large female Rattlesnake, which I had allowed to remain in the deal box covered with galvanised wire-netting in which I had bought her, for the simple reason that I had no better accommodation to spare on the voyage. Going to my cabin one afternoon, I met a little Rattlesnake climbing over the cant of the door; found two more at large inside; and was luckily just in time to prevent thirteen others from roving from the maternal home. Whether these sixteen constituted the entire brood, or whether some got adrift and were never discovered, I cannot say; but the uncertainty was not a pleasant one, either for me or my neighbours.

Glass, then, must be the medium through which the snakes, large or small, are to be viewed, and due regard must be paid to the strength of this. If a single sheet is used it should be of a greater thickness than what would be called for in a number of smaller panes. A big Python missing its aim when striking at its prey, or (as will occasionally happen) darting at some object outside its cage, sends its head against the glass with a *thud* which is not likely to be forgotten by any one who is present at the time; and even the passive weight of part of its body, overbalanced when reared aloft to its utmost extent, or rolling off a branch, may strike a blow which will test its resistance severely. And not only the pane itself, but the manner in which it is fixed demands particular attention. Some years ago an immense Anaconda, which had just been put into one of the largest compartments in the Reptilium at the Zoological Gardens, lying doubled between the glass and the tree in the centre, quietly expanded its coil—"stretching itself"—and pushed the front of the cage right out, the frame being forced away from its connections!

If the height be such that the snakes cannot reach it under any circumstances, or can at most only touch it without being

able to exert their force against it, the roof may with advantage be constructed of open wirework, strong netting of a small circular mesh being always preferable to bars. Perforated zinc, set in a metal binding and strengthened on the outside with transverse battens, must be used instead, if the den be not sufficiently high to keep it out of their way—it will be observed that I have not yet described anything for them to climb upon. This roof had better be arranged so that it can be removed at pleasure where practicable, care being taken to let it broadly overlap the space which it covers, and to fasten it securely with a bolt and staple, at intervals of not more than three feet. Where the cage extends to the ceiling of the building, the two ends should be provided with strips of perforated zinc, a foot broad, at their upper part, and a grated ventilator leading to the outside may be inserted in the middle or most inaccessible spot in the roof.

Whatever glass is employed must be a *fixture*, and a hinged (not sliding) door, high and wide enough for a man to enter, ought to be placed at each end; these doors should expose the floor of the cage, for convenience of cleaning, and should lie entirely upon the outside, not fitting into their aperture, as the door of a room does, but overlapping it like the lid of a box. Thus they can never become jammed. It will be found desirable to have also a small door or trap, a foot square or even less, for the purpose of introducing food; this may be cut in one of the proper doors or elsewhere, but is best situated on a level with the floor, so that rats or rabbits not eaten can be lured back into their box without the necessity of entering the cage to catch them. Methods of fastening and other details connected with these doors will be taken into consideration in a subsequent chapter, as will the general arrangements of the interior; two points, however, may be noticed here.

A stout limb of a tree, with the bark on it and plenty of branches lopped short,—the points of the forks trending upwards, of course,—should extend from the floor to the upper part of one side, or angle, in not too steep a slant, and be firmly fixed at both ends. This is an item of furniture which ought never to be omitted; snakes delight not only to climb, but to rest on the branches, and, by the exercise it affords them, a tree practically doubles the size of a cage.

Reptiles which never leave the ground in their wild state will glide about the bough like whip-snakes in a cage. If the dimensions of the den permit, two or three such gymnasia may be erected. Rockwork and artificial grottoes at the back are not to be commended, since the snakes are always hiding if the interstices are large enough, and trying to if they are not—witness the elaborately got-up serpent-cases in the lion-house at Antwerp, where, moreover, a most ridiculous effect is produced by looking-glasses.

(To be continued.)

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## NOTES AND QUERIES.

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I had rather confess my ignorance than falsely profess knowledge. It is no shame not to know all things, but it is a just shame to overreach in anything.—BISHOP HALL.

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**The Natural History Museum, South Kensington.**—Considerable progress has been made with the removal of the Natural History collections from the British Museum to South Kensington. The Geological collections have been to a great extent arranged, and the Mammalian and Reptilian Galleries are nearly completed, while the Fish Gallery is in course of arrangement, as well as the rooms devoted to the Invertebrata and the stratigraphical collections. The cases in the Zoological Galleries are now almost completed and fitted, and the Osteological and Conchological collections, as well as some of the stuffed animals, have been already removed to the new positions which they will henceforth occupy. It is expected that the transfer of the whole of the collections which are destined for removal from Bloomsbury to South Kensington will be completed by the end of the spring.

**The British Association.**—The Council of the British Association for the Advancement of Science have nominated Mr. A. G. Vernon Harcourt to the office of General Secretary, in the room of the late Prof. F. M. Balfour. The Council, acting under the powers conferred upon them by the General Committee, in accordance with their report, have appointed the following to be a committee, "to draw up suggestions upon methods of more systematic observations, and plans of operations for local Societies, together with a more uniform mode of publication of the results of their work," and to "draw up a list of local Societies which publish their proceedings":—Mr. H. G. Fordham (Secretary), Rev. Dr. Crosskey, Mr. C. E. De Rance, Sir Walter Elliot,



Mr. Francis Galton, Mr. John Hopkinson, Mr. R. Meldola, Mr. A. Ramsay, Prof. W. J. Sollas, Mr. G. J. Symons, Mr. W. Whitaker.

**Proposed Museum for Shrewsbury.**—In consequence of the removal of the Shrewsbury Royal Grammar School to new quarters on King's-land (a suburb of the town), it is proposed to utilise the old buildings for the purpose of a county museum, free library, and reading-rooms: and the Shropshire Archæological and Natural History Society are willing to transfer their valuable and interesting Roman, Archæological, Geological, Botanical, and Natural History collections to the building. £5000 are required to purchase the place and make the necessary alterations. Efforts are being made to raise this sum by subscription, £2000 having been already promised.

**Russian Endowment of Scientific Research.**—The Emperor of Russia has ordered £2200 to be allotted from the Imperial Treasury to the Russian traveller in New Guinea and the Malay Archipelago, M. Miklucho Maklay, in order to enable him to work up the results of his explorations. His Majesty has also ordered M. Maklay to be informed that the cost of the publication of his book of travels will be defrayed by the privy purse.

#### MAMMALIA.

**Food of the Hedgehog.**—The Hedgehog is generally described as a purely insectivorous animal, and many persons doubt whether the charge of sucking eggs, sometimes brought against him, is true. I had several sea-birds' eggs sent me last summer from the cliffs about Flamborough, and one or two of these were slightly cracked, a small piece of the shell of one being absent. I placed the box containing them, with the lid off, in the garden about dusk, and going out a short time after noticed a Hedgehog which I had standing on his hind feet with his nose in the box. On seeing me he instantly withdrew, and going up to the box I saw that the damaged egg had the hole considerably enlarged, and some of the yelk was about, evidently done by the Hedgehog's front paws whilst enlarging the hole; the contents, too, had been sucked up. The carnivorous propensity of this animal also has lately come under my notice, the victim being a young Landrail which I had in my possession. About dusk I was surprised to hear cries of distress, and on going to the place from whence the sound proceeded saw the Hedgehog before alluded to with the Landrail in his jaws, held crosswise. On taking the bird up, I found life to be all but extinct, the teeth-marks of the Hedgehog being plainly visible.—W. HEWETT (York).

**The Polecat in Devon.**—I very much fear that this animal has become extinct, if not in Devon, at any rate in the Exeter District. I have not seen one alive since 1852. The gamekeepers to whom I have

spoken about it all say they have not met with one for a long time, and I cannot see any recently-killed ones hung up in the places where such trophies are usually suspended. The Weasel also seems to be getting scarce. It would be well to put on record, before it is too late to do so with accuracy, the date at which the Polecat became extinct in Devon, if it be so, and I should be very glad to learn what others know about it. The Stoat appears to be still moderately plentiful.—W. S. M. D'URBAN (Exeter).

## BIRDS.

**Ornithological Notes from North Northamptonshire.**—The Hobby, *Falco subbuteo*, was, as before mentioned (Zool. 1882, p. 392), much more frequent in our neighbourhood during the summer of 1882 than for many years previously; the last seen was distinctly recognised by me on the 17th September. The Peregrine Falcon, *Falco peregrinus*, was reported to me, on good authority, as having been observed in pursuit of a covey of Partridges on September 7th. I merely note this as a somewhat early appearance of this species in our locality. The first Wigeon, *Mareca penelope* (a female), was seen and shot September 23rd; a Teal, *Querquedula crecca*, was killed on the same day, but several of this latter species appeared about Lilford in the third week of August, and I have good grounds for believing that the Teal occasionally breeds in our neighbourhood. A Quail, *Coturnix communis*, was killed near Lowick, Thrapston, September 9th—the first occurrence of this species in our neighbourhood, which has come to my knowledge for several years past. I noticed a Grey Wagtail, *Motacilla sulphurea*, about the boathouse at Lilford, September 15th. I have seldom, if ever, seen this species hereabouts before November, but one of our people who was with me, and saw this bird just mentioned, assures me that the Grey Wagtail (which he perfectly distinguishes from the Yellow, *M. Rayi*), breeds every year at Titchmarsh Mill, on the Nen, about two miles from Lilford. The first Redwing of the season was seen by me October 5th, first heard of October 3rd (unusually late); first Jack Snipe, *Gallinago gallinula*, Oct. 10th; Grey Crow, *Corvus cornix*, Sept. 30th (exceptionally early); Laughing Gulls, *Larus ridibundus*, Oct. 13th; Golden Plovers, *Charadrius pluvialis*, Oct. 3rd; Ring Ouzel, *Turdus torquatus*, Oct. 13th. A trained Falcon, soaring high in air over our valley, was stooped at repeatedly by a small bird of prey, which I have no doubt was a Merlin, *Falco aesalon*. On the day following this occurrence (Oct. 8th) my falconer assured me that he saw no less than six Merlins pass over the house at Lilford in a southerly direction in less than an hour's time. My friend and neighbour, Mr. G. Hunt, reported having witnessed an extraordinary migration of Starlings, *Sturnus vulgaris*, on October 20th; he describes them as passing him in thousands for more than two hours, flying low in a southerly direction, against the wind, up the valley of the Nen. A very

unusual number of Jays, *Garrulus glandarius*, appeared in our woods early in October. A Water Rail, *Rallus aquaticus*, was seen at the Aviary Pond, Lilford, Oct. 21st. Hawfinches, *Coccothraustes vulgaris*, appeared in large numbers about the lawn at Lilford, October 24th, on which day we were visited by furious sudden squalls of wind from N.W., with heavy snow at times, and some thunder and lightning. Bramblings, *Fringilla montifringilla*, were in force about the lawn at Lilford, Oct. 25th. I have no exact record of the date of the first appearance of Woodcock, *Scolopax rusticola*, in our neighbourhood this autumn, but it was during the week beginning October 22nd. The Fieldfare, *Turdus pilaris*, was first seen on October 30th.—LILFORD.

**Ornithological Notes from the Isle of Wight.**—In a former note the late appearance of Swallows was remarked on, none having been seen till the 14th April. But the Martin was still more behind time, none, so far as I am aware, having been observed till May. Few of either species remained here throughout the summer, and none to breed. It is noteworthy that of late years neither species has abounded, except at the autumnal migration; the reason I am at a loss to conjecture. The scarcity of our common birds is readily accounted for, seeing that thousands perished the winter before last, frozen or starved to death even in this sheltered locality; but how to account for the paucity of the summer migrants I know not, unless many perished during that severe weather in the South of Europe. A small party of Ring Ouzels was seen among the gorse at the foot of the Downs towards the latter end of October; none breed here, but are generally to be met with at the autumnal migration. A Rook of a greyish white colour was lately seen in Appuldurcombe Park. Both Swallows and Martins were observed in considerable numbers on the 31st October, in a sheltered part of the town; they are generally to be met with till the middle of November, or later. I am informed by a neighbour who has a fair knowledge of birds that he observed, on the 14th October, a very large dark-plumaged bird—an Eagle, he says—pass over the town in a westerly direction. From the description given I believe it was an Osprey. Mr. Henry Rogers, of Freshwater, has sent me a list of the birds seen or heard of during the past summer and autumn, also of those that have bred in the cliffs. On May 11th a pair of Hoopoes were brought to him. On the following day two Pied Flycatchers were seen, a species that has been several times observed at Freshwater, and I have known of two being shot—one at Sea View and another near Ryde. On September 19th a Little Owl, a male, in fine plumage, was procured. I am not aware that *Strix passerina* was ever met with before in the island. A Whimbrel was shot the same day. On the 2nd October Ring Ouzels were observed on the Downs, also large flocks of Golden Plover. On the 12th several Fieldfares and Redwings were seen—the earliest date Mr. Rogers remembers. On

the 20th several Black Redstarts, both male and female, were met with, and one was shot near Freshwater Bay. A Grey Phalarope was procured on the 3rd November. Though the Chough has been twice seen during the summer, it does not breed in the island, but there is reason to believe that it would do so, as of yore, if protected. It is much to be regretted that a strict watch is not kept at Freshwater during the nesting season: only a year or two ago I saw a pair of Peregrines, in perfect plumage, that had been trapped and the eggs taken. I am informed by Mr. Dimmick, of Ryde, that on the 7th November he had an adult Richardson's Skua brought to him.—HENRY HADFIELD (High Cliff, Ventnor).

**Ornithological Notes from Devon.**—A remarkably coloured young Rook was shot near Crediton on July 13th, and brought to me. The quill-feathers were pure white, and the legs and feet were mottled with white. A Hoopoe was shot on Dawlish Warren on August 19th. I know of only four previous occurrences of this bird in the Exeter district since 1820. In this county Hoopoes nearly always occur on or near the coast. The last date at which a Swift was seen by me near Exeter was August 17th, but there were very few about after the 10th. On August 20th, the weather being cold and stormy, a flight of Missel Thrushes passed over Exeter from the north-east at 4.20 p.m. A Red-legged Partridge was shot near Okehampton on October 3rd: this is not a common bird in Devon. A Woodcock was seen on October 10th, at Whitstone, near Exeter. It may have been bred in the neighbourhood, as a nest was found in that parish in 1853, the young being hatched on April 23rd. Another Woodcock occurred near Moretonhampstead on the 15th and two others at the Grange, near Honiton, on the 21st October. A female Black Redstart was captured alive near Exeter, and was shown to me in a cage on October 7th. This is an early date for this species to arrive; they are seldom met with before November, though they have occurred as early as September. Swallows and House Martins were very numerous up to October 14th, about Lidford, but since that date I have not seen any. At the beginning of September there were several Landrails in a poulterer's shop in Exeter; and on October 13th one was put up on the moor near Lidford, and I also saw one which had been shot the previous day on Blackdown, near Lidford railway-station. On October 13th I also saw two Jack Snipe on Dartmoor. Bullfinches were very numerous in the oak-copses in Lydford Gorge in October; and I noticed a Cirl Bunting amongst a lot of small birds in that neighbourhood. On November 14th Rooks were very busy carrying off acorns from some evergreen oaks in front of my window. They pitch on the topmost sprays and pick off the acorns with much difficulty.—W. S. M. D'URBAN (Albuera, St. Leonard's, Exeter).

**The Note of the Manx Shearwater.**—As a member of the Committee appointed by the British Association to collect observations on the migration



of birds at lighthouses, I have recently had much correspondence with the light-keepers. On April 25th Edward M'Carron, keeper at the Tearaght Rock Lighthouse, off the coast of Kerry, wrote to me thus:—"There is some solitary bird—so it seems, as there appears to be only one—makes a noise so loud, or crows so loud, in the cliffs that we can hear it distinctly in the dwellings. It sounds as follows, 'kuck, kuck, ko—kuck, kuck, ko.' This is repeated a few times, and then there is an interval of some minutes. For so far I can neither see it nor hear it in the daytime. I believe it is called in this place the 'Night-bird.'" Towards the end of May I happened to be on the island of Lambay, off the Dublin coast, for a few days, with my friend Mr. H. C. Hart, and the coast-guard officer stationed there described a remarkable note uttered by some bird at night-time round the island. Curious to hear it, I started alone about midnight for a walk along the cliffs. The night was calm and dark, and for a considerable time I stumbled along among the briars and rabbit-holes close to the edge of the cliffs without hearing anything. Having reached a dark little inlet, I suddenly heard an unusual and loud noise. It seemed about a hundred yards out to sea, and evidently came from something in motion. I thought I saw a bird: the noise was loud, and is not easy to describe, the note being repeated three times. Indeed had I not been prepared for some sound the noise would have startled me. Within the space of half an hour I heard it four or five times. Sometimes it approached near to the cliffs, and even seemed a little way inland. In calm weather it would be heard a long distance over the water. Thompson, in his 'Natural History of Ireland' (vol. iii. p. 412), speaking of the Manx Shearwater, says:—"Mr. R. Chute informed me, in 1846, that the Shearwater breeds on the larger Skellig Island, off the coast of Kerry, whence a specimen was sent to him in July, 1850. They are called 'Night-birds,' from the circumstance of their being only seen at night about the rock." In July, 1880, I visited the Skelligs for botanical purposes, and also the Tearaght Rock, twenty two miles north of the Skelligs. I saw the Gannets breeding on the Little Skellig, and the Manx Shearwater was seen in the neighbourhood of both islands. In May last I saw this Shearwater near Lambay, where it is known to breed (Watters, 'Birds of Ireland,' p. 267). It is highly probable, from the foregoing evidence, that the noise heard by the light-keeper at the Tearaght Rock and the noise I heard at Lambay was produced by the Manx Shearwater.—

RICHARD M. BARRINGTON (Fassaroe, Bray).

[It does not appear to us that there is any evidence at all to connect the sound heard with the Manx Shearwater, the author of the cry not having been seen. All that can be said is that the note in question, being unlike that of any of the Gulls or other well-known rock-haunting sea-fowl, and the Manx Shearwater being nocturnal in its habits, it is *probably* the author of the peculiar cry described.—ED.]

**Late stay of the Swift in Autumn.**—I saw a Swift here, at Llandaff, on October 17th. Once it passed about twelve or fifteen feet above my head, so there was no possibility of my mistaking the species. On the following morning I again saw the bird,—no doubt the same one,—but flying higher in the air than on the previous afternoon, probably finding food abundant, as the day was bright and genial. To my surprise I saw it for the third time on October 20th in the same locality, at a fair height in the air, and concluded that it roosted in the cathedral spire, as I watched it till nearly dusk, and it did not fly any great distance from the building. Since writing the above I have seen this solitary bird twice more—on October 28th (a wet, cold day) and on November 3rd, when it was flying about the same place where I had previously seen it, skimming through the air as on a summer's day. On this last occasion I was able to direct the attention of others to it, who were equally surprised with myself to see this bird so late in the autumn. I believe it is unusual for the Swift to stay with us after the 11th or 12th August; this year, however, I counted fourteen on the evening of August 24th, flying over the River Taff; and I find there are several instances of its being seen both in September and October. I have seen it myself in September in the North of Scotland, where on the evening of the 8th, about dusk, I counted upwards of fifty, flying along the line of the sea-shore from east to west, evidently migrating; I can, however, find no instance of its having been observed to take up its abode for any length of time in the same place at this period of the year, and considering the weather that prevailed at that time, it is a marvel to me how the bird could have existed.—C. YOUNG (Llandaff).

**Lesser Redpoll breeding near Oxford.**—Although, according to Mr. A. G. More, Oxfordshire is one of the counties in which this species occasionally breeds, the only nest that I have heard of was found near Marston, in May, 1882. It was placed in a hedge and only contained two eggs, one of which my informant took out to examine. Thereupon the old birds flew up, the male (in crimson dress) perching quite close to the nest. Unluckily, they forsook the nest. It is possible that other pairs bred here last summer, because Mr. S. Salter, who has until this year always resided near Oxford, and is a very keen observer, recently wrote to me that on visiting Oxford on and after July 20th he was much struck by the numbers of Lesser Redpolls in the parks.—H. A. MACPHERSON (Oxford).

**Nightingale in Ireland.**—There is a specimen of the Nightingale preserved in the Museum of Queen's College, Cork, of which no notice appears to have been published. Mr. F. R. Rohu, taxidermist, Cork, in answer to my inquiry, replies, "I shot it myself at the Old Head of Kinsale about the 10th September, 1876." When recently at Mr. Fennessy's nursery in Waterford, he informed me that his foreman, Mr. Thomas Vobe, had seen

a Nightingale there. I asked to see Mr. Vobe, an intelligent Englishman, who informed me that he was very well acquainted with the appearance and notes of the Nightingale in the southern counties of England; that towards the end of last May he saw and heard a Nightingale most distinctly in the Waterford Nursery, and that he watched it for nearly an hour between 8 and 9 p.m., being much interested about it.—R. J. USSHER (Cappagh, Waterford).

**Red-backed Shrike and Manx Shearwater in Nottinghamshire.**—I shot a female Red-backed Shrike near the house here: it is the first specimen I have seen in North Notts. A Manx Shearwater was picked up in an exhausted state in the school-yard at Sutton-in-Ashfield, which is about sixty miles from the sea, on September 1st. It only lived a short time after being found. It is a great addition to my collection as a Nottinghamshire bird.—J. WHITAKER (Rainworth, Notts).

**Goshawk near Oxford.**—On October 19th I heard from a bird-loving cobbler in St. Clement's that a Goshawk, *Astur palumbarius*, had been taken near Shotover on the 12th. My informant had purchased it from the birdeatcher, who took it in his clap-nets as it pounced on one of his decoy-birds. I found it still in the flesh. Mr. O. V. Aplin and his brother agree with me that it is probably a young male. We only know of one other occurrence of the species in Oxon.—H. A. MACPHERSON (Oxford).

**Great Snipe in Lincolnshire.**—A male specimen of this bird was shot at Stickney on the 4th October last, and sent to me for preservation. It was exceedingly fat, and weighed very nearly ten ounces.—J. CULLINGFORD (University Museum, Durham).

**Coot and Moorhen laying in the same Nest.**—Whilst collecting on Strensall Common in May last I found, in a nest of the Waterhen containing eight eggs, two eggs of the Coot. These were placed in the middle of the nest surrounded by the eggs of the Waterhen.—W. HEWETT (York).

**On the Missel Thrush and Chaffinch nesting in proximity.**—A few days since, whilst reading Mr. Dresser's 'Birds of Europe,' I came upon the lengthy quotation which he makes from the writings of a French author describing the interesting fact that in the immediate neighbourhood of Paris the Missel Thrush and the Chaffinch almost invariably nest in company. This French gentleman had found a considerable number of nests of the Missel Thrush, and on every single occasion there was a Chaffinch's nest within a few yards—generally on the same tree. It seems that the Chaffinch acts as watchman, giving immediate notice to the Missel Thrush of the approach of a Magpie or any bird of egg-thieving habits, whereupon the Missel Thrush immediately sallies out and does battle with

the invader, thus preserving her own eggs and those of her guardian. This peculiar habit seems not to have been observed in other parts of France, and Mr. Dresser's object in mentioning it is, as he says, to draw attention to it and discover whether it has ever before been noticed in England. I was immediately reminded of a paragraph which I saw in the 'Daily News' of August, 1876, as follows:—"Mr. F. Baker, of Kingscote, Wokingham, writes to us—'In May last a Missel Thrush built in a fir on my lawn. About ten days after a Chaffinch built on a branch of the same tree, and was sitting when the Missel Thrush hatched. I could not, after long watching, see the male Thrush, by which I was led to believe he was somehow destroyed. When the young were a few days old I frequently heard them clamouring, as if being fed, when in a few moments the cock Chaffinch only would fly from that part of the tree occupied by the Thrush's nest. Not understanding this, I posted myself in a position some distance from the tree, whence, with the aid of a telescope, I could command a full view of the nest, and was much astonished on seeing the Chaffinch repeatedly come and feed the young Thrushes—in fact, much oftener than the Thrush, which he would attack and drive away every time he found her near the nest. He fed them till they flew, when his own young were hatched, which he assisted his mate in rearing with equal assiduity.'" From this it appears that the above-mentioned habit, or something very like it, has on one occasion, at least, been observed in England.—ROBERT MILLER CHRISTY (Saffron Walden).

**Hobby breeding in Oxfordshire.**—In June, 1882, a pair of nesting Hobbies were shot, and their nest with two eggs taken, in a wood near Cumnor.—H. A. MACPHERSON (Oxford).

**Montagu's Harrier in Ireland.**—At Brittas, in the Queen's County, the seat of the late General Dunne, is preserved a specimen of *Circus cineraceus*, which I have examined, and which bears the following inscription:—"Montagu's Harrier, shot by John McEvoy, gamekeeper, on Ballinahemey Mountain, 25th September, 1855." This mountain is part of the adjacent Slieve Bloom range. Mr. Robert Dunne, writing recently from Brittas, has informed me that this specimen is in good preservation. This is the fourth instance, I believe, in which Montagu's Harrier has been obtained in Ireland. Two are recorded in Thompson—No. 1, at Bray (vol. i., p. 247); No. 2, at the Scalp (vol. ii., p. viii). A third, again at the Scalp, in 1877, on the authority of Mr. E. Williams, recorded by Mr. A. G. More, in the 'British Association Guide to Dublin' (1878), p. 78.—R. J. USSHER (Cappagh, Co. Waterford).

**Great Crested Grebe breeding in Oxfordshire.**—Two pairs of the Great Crested Grebe, *Podiceps cristatus*, reared their young last summer on Clattercut Reservoir, an extensive piece of water in the north of this county.



Mr. H. Holbeck, of Farnborough Hall, and I, early in August, saw both pairs and four young ones; two of these were nearly full grown, the others were smaller, and still followed the old bird. Mr. Holbeck tells me he saw three young ones there in July, 1880.—OLIVER V. APLIN (Banbury, Oxon).

**Albino Common Bunting.**—On the 4th September last I got a pure white Common Bunting from the south of Lincolnshire. It was so shattered by the shot that it was impossible to tell the sex.—J. CULLINGFORD (University Museum, Durham).

**The Black-winged Peafowl.**—Mr. Cecil Smith's valuable note on Black-winged Pea-fowl (Zool. 1882, p. 462) leads me to think that the readers of 'The Zoologist' may be interested in referring to some careful remarks on this subject contained in a work entitled 'Notes by Sir Robert Heron,' third edition (1852), p. 25. Many years ago I myself bred a perfect black-winged Peacock from parents of the ordinary race, which, so far as I know, had no black-winged ancestry. The excess of dark colouring in the males of this race, and the invariable deficiency of dark colouring in the females, is, I think, a noteworthy circumstance.—J. H. GURNEY (Northrepps Hall).

**Rustic Bunting near London.**—Mr. Burton, of Wardour Street, was good enough to send me a small Bunting, in the flesh, on November 20th ult., which proved to be a young male of the Rustic, or Lesbian, Bunting, *Emberiza rustica*, Pallas, of which species, I believe, there has been but one recorded occurrence in this country. Mr. Burton informs me that the present specimen was taken in the nets of a birdcatcher at Elstree Reservoir on November 19th.—LILFORD.

[The first, and hitherto the only, recorded British example of this Bunting was taken near Brighton, in October, 1867. It was reported by the late Mr. Gould in 'The Ibis' for 1869, p. 128, and is figured in his finely illustrated 'Birds of Great Britain.' The nidification of this bird has been recently elucidated by Mr. Seebohm, who found it breeding in Asiatic Siberia. See his recently published book, 'Siberia in Asia,' of which a review is given in this number.—ED.]

**Short-toed Lark near Cambridge.**—I understand that a specimen of the Short-toed Lark, *Calandrella brachydactyla* (Leisler), was taken by a birdcatcher near Cambridge in the middle of November last, and submitted for the inspection and opinion of Prof. Newton, who confirmed the surmise as to its species and rarity in the British Islands. Only about half-a-dozen examples of this bird have been recorded to have been met with in England, and, with one exception, these were all obtained in the southern counties of Sussex, Hants, and Cornwall.—J. E. HARTING.

**The Blue-tailed Bee-eater.**—Mr. Hancock, in his 'Catalogue of the Birds of Northumberland and Durham,' p. 28 (Newcastle, 1874), says a

specimen of the Blue-tailed Bee-eater (*Merops philippinus*, Linn.) was shot near the Snook, Seaton Carew, in August, 1862." Endeavours have been recently made to obtain this example for identification, but without success; when its whereabouts are known it will probably prove to be a specimen of the Blue-checked Bee-eater (*Merops persicus*, Pallas), as Mr. Dresser remarked in his article in the 'Birds of Europe,' v. p. 168 (1877). It is much more probable for the ordinary African species to occur in Great Britain than for an inhabitant of the Philippines to wander so far west. The young of the two species bear a close resemblance to one another.—H. T. WHARTON (39, St. George's Road, Kilburn, N.W.)

**The Tawny Pipit in Sussex.**—On the 23rd October last a Tawny Pipit, *Anthus campestris*, was caught by a birdcatcher in the neighbourhood of Brighton. Five instances of the occurrence of this bird in England are recorded in Mr. Harting's 'Handbook of British Birds' (p. 108). Since the publication of this work, in 1872, two more have been reported, which, together with the subject under notice, bring the number up to eight. It seems somewhat strange that, with a single exception (the one from Scilly, noticed by Mr. Rodd, Zool. 1868, p. 1458), all these specimens have been obtained in the neighbourhood of Brighton.—THOMAS PARKIN (Halton, near Hastings).

**Building Sites of the House Martin.**—In reading your review of Mr. Lucas's book on the 'Natural History of Nidderdale' (Zool. 1882, p. 437), I was struck with the mention of a breeding locality of *Hirundo urbica*, under the ledges of the limestone cliffs in Wharfedale, as also of a remark implying that it was only among limestone cliffs that the nests were to be met with in this, their natural position. I am acquainted with three localities where the nests are to be met with *in cliffs*: namely, among the rocks of Cromarty (in a gully near the sea-shore), which are red-sandstone, as is well known; secondly, in some sandstone rocks by the side of a small stream that runs through the woods of Darnaway, N.B.; and, thirdly, on the sea-cliffs near Berry Head, Devon, where the formation is limestone.—C. YOUNG (Llandaff).

**Gyr Falcon in Sussex.**—A fine specimen of this noble Falcon was shot by Mr. G. Foord, of Balsdean, on September 26th. It was brought to Lewes Market on the above-mentioned day, sold to Mr. R. J. Woodman, and re-sold by him to me. It had been seen some weeks previously on the Downs, near Balsdean. The exact locality where the bird was killed was on the top of Bullock Hill, near Balsdean, which hill is well known to the followers of the Brookside Harriers. It was sent to Mr. Swaysland, taxidermist, of Queen's Road, Brighton, to be preserved, and from him I have learned the following particulars:—The Falcon proved to be a female, in good plumage, and, from the colouring, an adult bird of some age,

and in excellent condition. Length from point of beak to end of tail, 24½ in.; breadth of wings, when extended, from tip to tip, 52 in.; weight, 3 lbs. 11 oz. By a curious coincidence it is not at all unlikely that this Falcon was seen by Mr. Henry Swaysland, jun., in June last, who, writing to his father at Brighton, described the bird's plumage in accurate terms, having approached it within a distance of thirty yards, when sitting on the cliffs near Rousdon, Lyme Regis, the seat of Sir Henry Peek, M.P., for which gentleman Mr. Swaysland, jun., has been arranging a collection of birds, and on whose domain the wild and lofty cliffs fronting the sea form a splendid haunt for many of our noblest birds, and where, I have been informed, the Peregrine and the Raven have been seen nesting within a short distance of each other.—T. J. MONK (Lewes).

[Our contributor does not state to what species of Gyr Falcon the bird in question belongs; but another correspondent, Mr. Thomas Parkin, of Halton, near Hastings, who has seen it, assures us that it is a Greenland Falcon.—ED.]

**Food of the Bittern.**—I do not think that any record has been published of a fine Bittern shot near Brookhampton, Oxon, late in November, 1879. I saw it in Oxford Market, and Mr. Darbey, the birdstuffer, opened it, when we took out six or seven small dace.—H. A. MACPHERSON (Oxford).

**Honey Buzzard in Lincolnshire.**—On the 24th October I received a fine specimen of this bird, which had been shot near Boston a day or two previously. The crop was quite empty. It is a light variety, and an adult female.—J. CULLINGFORD (University Museum, Durham).

**Purchase of the Audubon Collection of Birds.**—Prof. Henry A. Ward, of Rochester, New York, has purchased from Mr. M. R. Audubon, a grandson of the famous ornithologist, the collection of 748 skins of birds gathered by John J. Audubon, when preparing his great work, the 'Birds of America.' The collection is said to be in a fine state of preservation, and many of the labels are in Audubon's handwriting.

**Yarrell's 'British Birds.'**—The 16th part of the fourth edition of "Yarrell," revised by Mr. Howard Saunders, will be published next month, and it is expected that the succeeding parts will thenceforward be issued at regular intervals.

**'The Ibis' List of British Birds.**—We understand that 'The Ibis List of British Birds,' compiled by a Committee appointed by the British Ornithologists' Union, is for the most part in the press, and will be published before the next annual meeting of the B. O. U.

#### FISHES.

**Swordfish on the Coast of Norfolk.**—A fine example of *Xiphias gladius*, Linn., was captured in Burnham Harbour, on November 13th,

1882. The fishermen observed it struggling in what is called "the lake," where the water remains inside the bar at low tides. The fish was nearly exhausted, and its captor informed me only flapped its gills a few times before being landed. It measured ten feet from the tip of the sword to a point equidistant between the lobes of the tail-fin.—H. W. FEILDEN (West House, Wells, Norfolk).

**Fox Shark, or "Thresher," off the Coast of Devon.**—This Shark so frequently occurs on the Devonshire coast in autumn—following the Pilchards as they ascend the channel—that it is hardly worth while recording each capture. One which I saw, on the 24th September last, at Exmouth, was taken the day before off Teignmouth. It was ten feet long, and therefore rather a small specimen, the usual size being thirteen or fourteen feet, including the tail. In October, 1874, I received one only four feet in total length, which had been taken at Brixham. The skin of this fish is so very tender that few persons can succeed in removing it entire for preservation.—W. S. M. D'URBAN (Albuera, Exeter).

**Large Carp in Sussex.**—One day in November last the Earl of Sheffield, fishing in his private water at Sheffield Park, Sussex, caught a Carp which weighed 19 lbs.

**Brill with both sides coloured.**—On the 6th September last, when Mr. A. K. Hamilton was trawling in his steam yacht 'Starlight' off the Pole Sand at Exmouth, he took a Brill having the deficiency in the continuance of the dorsal outline just behind the head which is mentioned by Couch, in his 'Fishes of the British Islands' (vol. iii., p. 197), as being occasionally observed in the Flounder. As in that fish, this notch behind the head is accompanied by coloration of the under, or usually white, side, with the exception of a white blotch on the gill-covers.—W. S. M. D'URBAN (Albuera, Exeter).

#### CRUSTACEA.

**Scyllarus arctus at Plymouth.**—On the 13th November, last two specimens of that rare Crustacean, *Scyllarus arctus*, were brought up in a trawl off Plymouth, and are now in the possession of Mr. W. Hearder.—JOHN GATCOMBE (55, Durnford Street, Stonehouse, Plymouth).

[We may remind our readers that this lobster-like Crustacean is figured in 'The Zoologist' for December, 1879, p. 473, in illustration of remarks on the species by Mr. Cornish.—ED.]

#### ARCHÆOLOGY.

**Ancient Camps in Epping Forest.**—The British Association has appointed a committee for the exploration of the ancient camps in Epping Forest. It has been found that on both sides of the Thames "dene holes"



exist which date from a time when the art of building can scarcely be said to have existed in this island, and when invisibility formed the best security against the sudden attacks of an enemy. In Essex "dene holes" are abundant in the district between East Tilbury and Purfleet. In Kent they are especially abundant near the old settlements, or sites for settlements, on the river, at Greenwich, Woolwich, Erith, and Greenhithe. Their position—one, two, or three miles from the river, and their concentration in spots about the same distance from the natural sites for settlements on the Thames, seem to suggest that they were used both as storehouses and as places of occasional refuge from pirates who might attack the villages on the river-bank. It is proposed to explore the Essex "dene holes" when the work at the Loughton camp is completed.

**Remains of the Irish Elk near Belfast.**—During the last week of November, as some workmen in the employ of Mr. Hugh Montgomery, of Rosemount, were engaged in making a drain in Grangee Bog, about a mile from Grey Abbey, they dug up the principal portion of the head and horns of what is believed to have been an Irish Elk. The antlers from tip to tip measure about ten feet. Subsequently more men were engaged at the same place, when the greater part of a large skeleton was laid bare. The skull and horns were removed to Rosemount House. On previous occasions remains of this animal have been exhumed in this part of County Down. The skeleton was dug out of a lake deposit west of Scrabo Hill, and within two miles of Newtownards. A complete skeleton was discovered between Newtownards and Donaghadee, and a large specimen was found in Shell Marl, near Quinten Castle, Portaferry.

**The Royal Therirotrophium near the Tower of London.**—Willughby, in 1678, describing the young of the Golden Eagle, which he terms "the Golden Eagle with a white ring about its tail" (*Ornithology*, p. 59), observes:—"We saw three birds of this sort in the Royal Therirotrophium near the Tower of London, and a fourth in St. James's Park, near Westminster." Is there any contemporary description of this "Therirotrophium," or Tower Menagerie, extant? if so, where may it be found? Pepys has an entry in his 'Diary,' under date 3rd May, 1662, which thus refers to it:—"To dinner to my Lady Sandwich, and Sir Thomas Crew's children coming thither, I took them and all my Ladys to the Tower and showed them the lions, and all that was to be shown."

**Ossiferous Cave near Cappagh, Co. Waterford.**—In 'The Zoologist' for 1879 (p. 331) Mr. R. J. Ussher gave an account of the discovery of an ossiferous cavern near Cappagh, in the Co. Waterford, which he was then engaged in exploring in company with the late Prof. Leith Adams and Mr. G. H. Kinahan. The results of this exploration, geological, zoological, and archæological, have since been published in a most interesting memoir,

printed in the first volume (second series) of the 'Scientific Transactions of the Royal Dublin Society,' to which our readers would do well to refer. The report embodies "Preliminary Remarks," by R. J. Ussher; "Physical Features of the Valley between the Blackwater and Dungarvon Bay, with a List of the Caves," by G. H. Kinahan; "Structure and Contents of the Ballynamintra Cave," by R. J. Ussher; "Animal Remains," by A. Leith Adams; "Implements," by R. J. Ussher; and a summary and general conclusions. The Report is illustrated with a map of the district, plans and sections of the caves, and plates of the more remarkable implements and animal remains discovered.

**Shakespeare's Animal Lore.**—Miss Phipson, of the New Shakespeare Society, has finished her book on 'The Animal Lore of Shakespeare's Time,' which is announced for publication in the spring.

**Dr. Johnson on the Glow-worm.**—Dr. Johnson informed Boswell that one of his first essays was a Latin poem on the Glow-worm, but his biographer omitted to ask where it was to be found. Has this been discovered?

**The Great Auk formerly eaten in Lent.**—Sir Patrick Walker, in a note communicated to Beckwith for his edition of Blount's 'Ancient Tenures' (p. 413), says:—"There is a bird nearly as large as a goose, called an Auk, the *Alca* of Linnaeus, which was allowed at one time to be eaten in Lent." What is the authority for this statement?

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## SCIENTIFIC SOCIETIES.

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### LINNEAN SOCIETY OF LONDON.

December 7, 1882.—Sir J. LUBBOCK, Bart., M.P., F.R.S., President, in the chair.

The following gentlemen were elected Fellows of the Society:—The Rev. R. Baron, F. O. Bower, J. H. Corry, O. L. Fraser, D. Houston, A. W. Howitt, H. McCallum, E. A. Petherick, S. Rous, and H. C. Stone.

Mr. G. Brook read "Notes on some little-known *Collembola* and the British species of the genus *Tomocerus*." Tullberg refers to their occurrence in Sweden, but the four species in question (viz., *Achorutes manubrialis*, *Xenyllo maritima*, *Triena mirabilis*, and *Tomocerus vulgaris*) have not hitherto been accorded a British habitat.

Then followed a paper entitled "Remarks on the genera of the subfamily *Chalcidinae*, with synonymic notes and descriptions of new species of *Leucospidinae* and *Chalcidinae*," by Mr. F. Kirby. The author remarks

that this subfamily is in a very unsatisfactory state, and the tendency of recent authors has been to class the majority of the species under the three genera, *Smicra*, *Halticella*, and *Chalcis*, ignoring the divisions which former writers have prepared, partly on the ground that several genera run into each other, and partly because it is usually considered that characters taken from one sex only are not sufficient to establish a genus. But in the order *Hymenoptera*, where the females frequently far outnumber the males, forming, in fact, the bulk of the species, it seems that the latter objection will hardly hold good. The author thereafter gives a revision of the groups in question, and defines several new genera.—J. MURIE.

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ZOOLOGICAL SOCIETY OF LONDON.

November 28, 1882.—Prof. W. H. FLOWER, LL.D., F.R.S., President, in the chair.

Mr. W. B. Tegetmeier exhibited and made remarks upon the skull of a Rhinoceros from Borneo; also the horns of a Buffalo and Deer from the same country.

Mr. J. E. Harting exhibited a specimen of the Eagle Owl, *Bubo maculosus*, said to have been obtained many years ago near Waterford, and preserved in the collection of Dr. Burkitt.

Mr. R. Bowdler Sharpe exhibited and made remarks on some specimens of Swifts from the Congo, and on a specimen of *Macharhamphus alcinus* which had been obtained in Borneo by Mr. Everett.

A communication was read from Prof. Owen, C.B., on the sternum of *Notornis*, and on sternal characters.

A communication was read from Dr. A. B. Meyer, in relation to the adoption by naturalists of an international colour-scale in describing the colours of natural objects.

A communication was read from Dr. W. Blasius, of Brunswick, containing the description of a small collection of birds made by Dr. Platen in the island of Ceram. The collection contained forty-nine specimens, referable to twenty-one different species, one of which was new to the fauna of Ceram.

A communication was read from Mr. E. P. Ramsay, containing the description of a new species of *Monarcha* from the Solomon Islands, proposed to be called *Monarcha (Piezorhynchus) Browni*.

Mr. W. Bancroft Escent read a paper on the acclimatization of the Indian Mungoos, *Herpestes griseus*, in Jamaica. The author explained that the object in introducing the Mungoos into Jamaica was the destruction of the rats, which had committed serious ravages among the sugar and coffee crops. The first Mungooses were introduced in 1871, and so beneficial

was the effect produced that the saving to the sugar and coffee planters now was estimated, at least, at £100,000 a year.

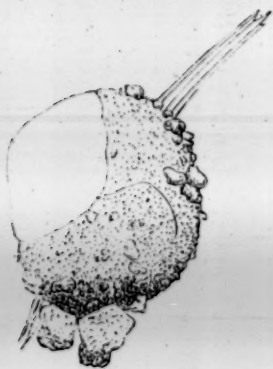
Lieut.-Col. Godwin-Austen read a paper describing specimens (male and female) of *Phasianus Humei*, Hume, which had been obtained by Mr. M. Ogle on the peak of Shiroifurur, in N.E. Munipur, upon the Naja Hills.

A communication was read from Mr. A. Thomson, containing the results of some observations made by him during the rearing of a species of Stick-insect, *Bacillus patellifer*, in the Society's Insect House.—P. L. SCLATER, Secretary.

#### ENTOMOLOGICAL SOCIETY OF LONDON.

November 1, 1882.—H. T. STANTON, Esq., F.R.S., &c., President, in the chair.

Mr. J. Jenner Weir exhibited living specimens of what he believed to be *Conocephalus ensiger*, Harris, which he had received from Messrs. J. Veitch & Sons, of Fulham Road, in whose hot-houses the locust had appeared in some numbers; they fed readily on flies and spiders, and had thriven in captivity for some weeks. Mr. Weir proposed to place the specimens exhibited in the "Insectarium" of the Zoological Society.



Mr. F. P. Pascoe exhibited a curious spider's nest found on the surface of the ground, attached to a stone, at Cagliari, Sardinia. The nest consisted of a silken bag, covered with earth, with a trap-door; it was quite unknown to the Rev. O. P. Cambridge, and no similar specimens were in the British Museum.

Mr. G. Lewis exhibited specimens of *Syntelia indica*, Westw., *S. histeroides*, Lewis, and *Sphærites* belonging to the *Synteliidae*; of *Figulus*, *Platyceus* and *Alsalus*, n.s., belonging to the *Lucanidae*; and of *Saprinus*, *Hololepta*, and a new genus of *Histeridae*; remarking on the similarity of outline in the respective genera of the three families, and referred to his recently published note on this subject (Ent. Mo. Mag. xix. 137).

Mr. A. G. Butler communicated a paper entitled "Heterocerous Lepidoptera collected in Chili by Thomas Edmonds, Esq.: Part IV. Pyrales and Micros." The collection contained seventy species of these groups, many of which were described as new. Several of Blanchard's genera were reviewed, and some extended remarks were made on Zeller's genus *Cryptolechia*. A few supplementary species in groups already treated of were referred to, and five additional species described as new.—E. A. FITCH, Hon. Secretary.

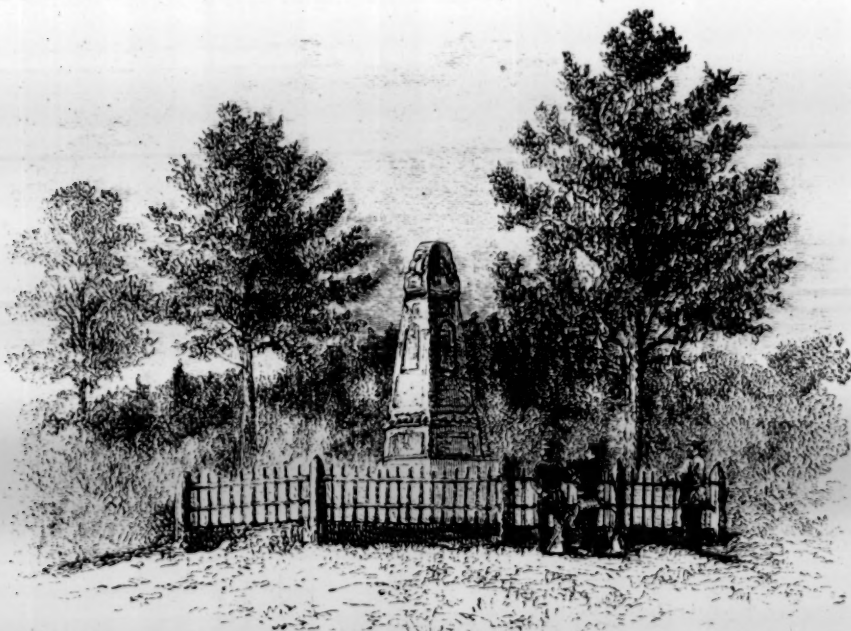


NOTICES OF NEW BOOKS.

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*Siberia in Asia: a Visit to the Valley of the Yenesay in East Siberia: with Descriptions of the Natural History, Migrations of Birds, &c.* By HENRY SEEBOHM. 8vo, pp. 298, with Map and Illustrations. London: John Murray. 1882.

THE narrative of Mr. Seeböhm's former journey to European Siberia in 1875, when he explored the country lying between the White and the Kara Seas, will be fresh in the recollection of our readers.\* Encouraged by the experience then gained and the collections made, and anxious to push on beyond the Ural further



BOUNDARY STONE BETWEEN EUROPE AND ASIA.

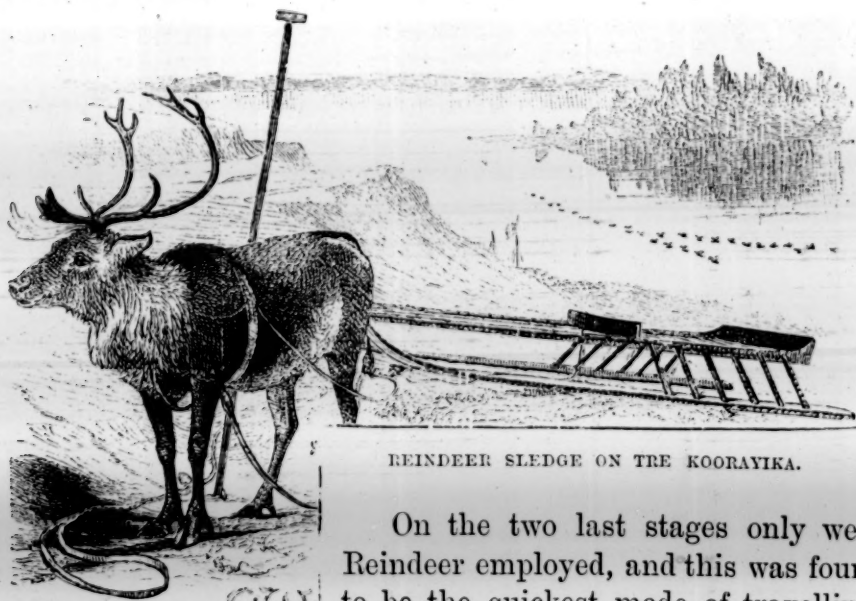
to the north-east, in the hope of securing fresh novelties and discovering the breeding haunts of certain birds, whose nidification has hitherto been shrouded in mystery, he resolved to make a second journey, and accordingly set out in March, 1877.

The expedition, as may be supposed, was a very arduous one, for after travelling by rail across Europe to St. Petersburg, and

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\* See 'Zoologist,' 1881, pp. 75, 116.

thence to Moscow and Nishni Novgorod, he had from that point to continue his journey for nearly 3000 miles by sledge over a country without roads until he reached Yenesaisk on the river Yenesay, said to be the third largest in the world, whence he had still 1000 miles to travel over the ice-bound water. By the time he had reached the river Koorayika, at its junction with the Yenesay, on April 23rd, he had come 3240 miles from Nishni Novgorod, and, including stoppages, had been forty-six days on the road, during which time he had employed for his sledges about a thousand horses (changed every fifteen or twenty miles), eighteen dogs, and forty reindeer, the total number of stages being 229.



REINDEER SLEDGE ON THE KOORAYIKA.

On the two last stages only were Reindeer employed, and this was found to be the quickest mode of travelling, the Reindeer, with their broad flat feet, getting over the snow-clad surface at a great pace.

Of the life led by the author in this uncivilized country, of the people he met with, and the beasts and birds he pursued and secured, a most interesting account is given. He found it very difficult to get any accurate information about the dress and habits of the various races inhabiting these parts, so numerous are they, and so mixed together and with the Russians; but he gives some curious information on the subject.

The history of animal and vegetable life on the Tundra is very remarkable, and is graphically told by Mr. Seeböhm in

Chapter XVIII. For eight months out of twelve every trace of vegetable life is completely hidden under a blanket of snow six feet thick, and during six months of this time, at least, animal life is only traceable by the footprints of a Reindeer or a Fox on the snow, or by the occasional appearance of a Raven or a Snowy Owl wandering about the limits of forest growth, where it has retired for the winter.



CARRION AND HOODED CROWS  
AND HYBRIDS.

When the ice on the great rivers breaks up, and the blanket of snow melts away, vegetable life awakes from its long sleep, and for three months a hot summer produces a brilliant alpine flora, like an English flower garden run wild, and a profusion of alpine fruit. Then various animals come forth from their winter retreat, and the great tide of bird migration sets in.

Although he did not succeed in discovering, as he had hoped to do, the breeding haunts of the Knot, the Sanderling, and the Curlew Sandpiper, Mr. Seeböhm nevertheless met with many

interesting species of birds (some, like the Rock Ptarmigan, not known to occur in Eastern Siberia), and found the nests and eggs of others, like the Little Bunting and Mountain Accentor, hitherto undescribed. Amongst the characteristic birds of this part of the world are the Fieldfare, the Siberian Chiffchaff and Stonechat, the Dusky Ouzel (*Merula fuscata*), the Siberian Ground Thrush (*Geocichla sibirica*), the Lapland Bunting, Little Bunting, Ruby-throated Warbler, Waxwing, Pine Grosbeak, Nutcracker, Three-toed Woodpecker, Willow Grouse, Golden Plover, Great Snipe, and Pin-tailed Snipe.

The interbreeding of the Carrion Crow with the Hooded Crow had never been noticed on such a large scale as observed by Mr. Seebohm, nor had the fact that the hybrids between these two species are fertile been satisfactorily ascertained. Mr. Seebohm obtained specimens of these hybrids in various stages, showing in different proportions their relationship to both parents.

Through the kindness of Mr. Murray, we are enabled to produce here Mr. C. Whympers's illustration of these birds (given at p. 288), as well as the characteristic sketch by the same artist of the Reindeer sledge (p. 61), and that interesting monument to the traveller, the Boundary Stone between Europe and Asia (p. 11).

Amongst the characteristic mammals of which Mr. Seebohm saw specimens or procured the skins, were Bears (six roubles the skin), Ermine (ten to fifteen kopeks a skin), Grey Squirrel (same price). The Striped Squirrel (common to both Asia and America) and the Siberian Marten were occasionally offered by the peasants for fifty kopeks to a rouble each. Two skins of the Glutton were bought, one for four the other for five roubles. Otter and Blue Fox (*Vulpes lagopus*) were offered at ten to twelve roubles; the latter, in its white winter garb, at three to five roubles. Mr. Seebohm made many inquiries for skins of the Sable (which is only found in Siberia) and the Black Fox (a melanistic form of (*V. vulgaris*), but never succeeded in seeing any, they being reserved probably for the Yenesaisk merchants, who would give twenty-five roubles for a Black Sable, and double that price for a Black Fox. The Beaver, it appears, has been extinct on the Yenesay for many years.

It was unfortunate that, having travelled so far, Mr. Seebohm was prevented from reaching the coast, and investigating the bird-life on the Kara Sea. He considers also that he would



have done better to await the arrival of the migratory birds at Yenesaïsk instead of on the arctic circle. But although he was disappointed in not discovering the nests of some of the birds of which he was in search, and obtaining specimens of others which he had hoped to meet with, the results of his journey in other respects were most satisfactory, and he is to be congratulated upon having returned safely to give this interesting narrative of his travels in a far off and little explored country.

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*The Fowler in Ireland; or, Notes on the Haunts and Habits of Wildfowl and Seafowl, including Instructions in the Art of Shooting and Capturing them.* By Sir R. PAYNE GALLWEY, Bart. With numerous illustrations. 8vo, pp. 503. London: Van Voorst. 1882.

As compared with what has been printed on the kindred sports of Shooting and Fishing, the literature which relates to Fowling is not very voluminous, nor has it kept pace, like the others, with the exigencies of the day. Indeed it is somewhat remarkable that more books were written on the subject before the invention of gunning-punts and breech-loaders than have appeared since. This is not to be explained by assuming a decrease in the number of fowlers; for, owing to the improvements in guns, there must surely be, at the present day, more shooters than ever. Of this number, however, the majority are unquestionably game-shots, and of those who devote themselves thoroughly to wildfowling few perhaps feel themselves competent to write authoritatively on the many important points which would require consideration.

The case seems to be otherwise with Sir R. Payne Gallwey, who, as is well known, has devoted himself for years to the sport on which he now writes, and who, as we gather from his book, has evidently coupled the successful pursuit of wildfowl with an attentive observation of their peculiar habits.

It is not in mere slaughter that the fowler takes delight. The exceeding wariness of the birds renders it extremely difficult to approach them, especially by daylight, and it is the satisfaction that is felt in making this approach, by skilfully manœuvring the punt, which gives such a zest to the pursuit. There is a pleasure, too, in watching the movements of a "company" of

fowl while lying unseen by them, and in noticing at close quarters the characteristic actions of the different species.

The art of Fowling has many branches. You may build a punt, single- or double-handed as required, mount a punt-gun with all the modern improvements and appliances, and spend your days and nights upon the water. Or you may eschew punts and keep ashore, confining your attention to Snipe, Duck and Teal, with an occasional shot at Plover or Curlew. You may construct a decoy, and take hundreds of fowl in a season without firing a shot; you may take Wild Geese in pitfalls, or Plovers in nets, or you may, if so inclined, relieve the monotony of a walk across the marshes by setting snares for Snipe and Woodcock.

On all and each of these subjects Sir R. Payne Gallwey has much to impart, and since his remarks are based on personal experiences, it is perhaps needless to say they are thoroughly practical.

From the naturalist's point of view, with which we are here chiefly concerned, his book is a very attractive one, for it contains many interesting and hitherto unpublished observations on the breeding of wildfowl in Ireland; on the habits of sea-fowl as observed at the Skelligs and other remote haunts; on the migration of birds as seen by the lighthouse-keepers; and on the present distribution of some of the rarer mammals of Ireland. The chapters which treat of these subjects are embellished with numerous woodcuts by Mr. Charles Whymper, most of which have been admirably drawn from nature, while seventeen full-page illustrations, by the same artist, depict very skilfully some of the various incidents of a fowler's life.

Of the practical part of the book—namely, that which treats in detail of yawls and cutters, punts and punt-guns, with all their modern and improved appliances—we need say no more than that the subject appears to be exhaustively dealt with. For our own part we have been more entertained with the mode described of constructing and working a decoy (Chapter IV.), and with the directions given for making and using a plover-net (Chapter X.), contrivances which show of what ingenuity the human mind is capable when striving to outwit the keen natural instinct displayed by wildfowl in their efforts at self-preservation.

*The Modern Sportsman's Gun and Rifle; including Game and Wildfowl Guns, Sporting and Match Rifles, and Revolvers.*  
By J. H. WALSH ("Stonehenge"), Editor of 'The Field.'  
In two volumes, 8vo. Vol. I., Game and Wildfowl Guns,  
pp. 459. With numerous illustrations. London: Horace  
Cox, 'The Field' Office. 1882.

THERE must be few sportsmen at the present day who have not experienced considerable difficulty in making choice of a new gun. The improvements which have been made in breech-loaders since the introduction of the Lefauchaux pin-fire gun have been so numerous and so varied, that it is no easy matter to decide upon the respective merits of the different actions; indeed only those who have paid close attention to the subject, and have carefully examined and tested the so-called novelties in guns as they have appeared, can consider themselves competent to express an opinion in the matter.

Mr. Walsh's long experience in this respect, coupled with the admitted efficacy of the tests which he has devised and applied, and which have been exhibited at the various 'Field' trials of guns, has specially qualified him to write authoritatively on the subject; and his opinion, therefore, as set forth in the work before us, must deservedly carry weight.

As a text-book on game and wildfowl guns, this volume should be read by every man who shoots, whether he is in search of a new gun or not; for it contains an illustrated history of guns for the last twenty years, showing the successive improvements which have been made, the details of which are most instructive.

To give some idea of the ground which is covered by this treatise, we may state that, following the definition of a shot-gun, the author points out the requirements of a sportsman's gun for his varied purposes, explains its construction, and the trials of *safety* by what is called "proof," and *efficiency* by shooting at a target. He describes the lock in all its details, with the various modifications of it which have been designed from time to time, and discusses fully the important subjects of choke-boring and regulating. Guns with hammers and those without them are fully considered, and subsequent chapters deal successively with cartridges, powder, wads and shot, and the not unimportant

questions of cleaning and repairing. The second portion of the volume is devoted to punt-guns and wildfowl shoulder-guns, and concludes with a useful "glossary of terms."

A book so practical in its details commends itself not alone to stay-at-home shooters; sportsmen who may be going abroad, and naturalists who may contemplate a collecting tour, will find in it information likely to be of service to them.

*A History of British Birds.* By the late WILLIAM YARRELL. Fourth Edition, revised to the end of the *Picidae* by Prof. NEWTON, F.R.S. Continued by HOWARD SAUNDERS, F.L.S. Part XV. London: Van Voorst. 1882.

WE are glad to see that another part of "Yarrell" has appeared, under the new editorship of Mr. Howard Saunders. This part finishes the *Picidae*, with which group (as every ornithologist will regret) Professor Newton's revision ends. Mr. Saunders has now revised the Pigeons, with several skilful emendations, and has written an entirely new chapter on Pallas's Sand Grouse. He gives a *resumé* of the facts connected with the remarkable visitation of this bird to the British Islands in 1863, prefaced with some remarks on the position of the species in the *Systema avium*, pointing out its structural peculiarities and apparent affinities. Referring to the views of previous writers who would class the Sand Grouse, on the one hand, with the Pigeons, on the other hand with the Plovers, he "thinks it advisable, on consideration, to adopt for the Sand Grouse the separate order to which Prof. Huxley gave the name of *Pteroclomorphæ* (Proc. Zool. Soc., 1868, p. 303), subsequently modified by Mr. Sclater to *Pterocletes* ('Ibis,' 1880, p. 407)."

The part before us concludes with a portion of the article *Capercaillie*, in which will be found some interesting remarks on the derivation of the name (as variously spelled "capercaillie," "capercallie" and "capercaillie"), and on early notices of the bird by mediæval writers.

